

REMARKS

Claims 1-22 remain in the case. The Examiner rejected claims 1-3, 6-11, 13-15, and 18-22 under 35 U.S.C. §102(b) in view of U.S. Patent No. 5,742,816 to *Barr* et. al (hereinafter "*Barr*"). The Examiner rejected claims 4-5, 12, and 16-17 under 35 U.S.C. §103(a) in view of *Barr* and U.S. Patent No. 5,870,751 to Martin John Trotter (hereinafter "*Trotter*"). Applicant respectfully submits that claims 1-22 are patentable in view of the remarks presented herein.

REJECTION OF CLAIMS 1-3, 6-11, 13-15, AND 18-22 UNDER 35 U.S.C. §102(b)

The Examiner rejected claims 1-3, 6-11, 13-15, and 18-22 under 35 U.S.C. §102(b) in view of *Barr*. Applicant respectfully traverses this rejection.

The Federal Circuit has made clear that "[a]nticipation under 35 U.S.C. §102 requires the disclosure in a single piece of prior art of each and every limitation of a claimed invention." *Apple Computer, Inc. v. Articulate Systems, Inc.*, 234 F.3d 14, 20, 57 U.S.P.Q.2d 1057, 1061 (Fed.Cir. 2000). Furthermore, the "identical invention must be shown in as complete detail [in the prior art] as is contained in the . . . claim" of the present invention. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed.Cir.1989). Applicant respectfully asserts that *Barr* fails to teach or disclose each element of the claimed invention as required under 35 U.S.C. §102(b).

Initially, it may be instructive to review the invention described in the present application and the disclosures of the prior art. In general, the present application describes a system and method related to receiving an incoming stream of text which is preferably a text document, comparing the stream of text to a semantic network that has been loaded substantially entirely

into RAM memory of the processor, the claimed invention performs a single examination of each word in the text stream to identify word patterns. When word patterns are identified in the stream of text, the corresponding objects containing word patterns that are found in the stream of text are referenced.

In contrast, *Barr* teaches under the “Operation of Search Engine” heading in columns 23 and 24 and in Figure 6b that a query of text in natural language format is submitted in order to produce words to be submitted to a commercial search engine. The results of the search engine are then processed to identify files related to the individual words submitted to the search engine. More specifically, as each word of the query is processed, words that are proper nouns and “slow words” are given a weighting factor, but are not processed by the semantic network. Each of the remainder of the words is passed through the semantic network. All of the processed words become search terms. The search terms with weighting factors are then applied to a document index database to identify documents in a database such as images, files, videos, etc. and to determine a relevance factor for each. The most relevant documents are returned to the searcher. The document search using the search terms uses a commercial search engine.

Claim 1 recites in pertinent part, “**consulting a semantic network to automatically identify one or more word patterns in the incoming stream of text with a single examination of each word.**” Applicants respectfully assert that *Barr* fails to teach or disclose identification of word patterns in the incoming stream of text. The Examiner asserts that the query in *Barr* comprises the incoming stream of text. A word pattern must include two or more words. *Barr* teaches passing a single word through a “semantic network.” See *Barr*, Col. 23, lines 52-55. Therefore, *Barr* teaches identifying a **single** word in the incoming stream of text.

Applicant finds no teaching or disclosure in *Barr* regarding identifying **word patterns** in the query. Therefore, *Barr* fails to teach each and every limitation of the claimed invention as legally required.

Barr does seem to teach examining each word in the query. However, not every word in the query passes through (consults) a semantic network, as in the claimed invention. Claim 1 recites “consulting a semantic network ... with a single examination of each word.” *Barr* clearly teaches that certain words are not passed through the semantic network. See *id*, Fig. 6b and Col. 23, lines 31-45. In stark contrast, in the claimed invention, the semantic network is consulted for each word examined in the stream of text.

Barr teaches that the generated search words are submitted to a commercial search engine. See *id*. Col. 23, lines 55-64. Applicant respectfully asserts that *Barr* does not teach identifying one or more word patterns and consulting a semantic network with a single examination of each word in a text stream.

In addition, Applicant respectfully asserts that *Barr* fails to “referenc[e] a known object identified by a word pattern of the semantic network.” Instead “the document identification numbers . . . and normalized relevance scores” are sent to the user. See *Barr*, Col. 24, lines 23-25. In addition, *Barr* cannot reference a known object because *Barr* does not identify word patterns.

As a result of the above remarks, Applicant asserts that independent claims 1 and 13 are in condition for allowance.

Claim 2 recites in pertinent part “**loading the semantic network substantially entirely into RAM memory of a processor[.]**” The Examiner asserts that the “[d]ocument index

database 117 in Fig. 3 contains a list of search terms (*Barr*, Col. 10 line 8-16), therefore this list corresponds to the ‘semantic network.’” Applicant respectfully asserts that the document index database is not equivalent to the semantic network in the *Barr*. Applicant must use the terms consistently in the claim to satisfy definiteness requirements under 35 U.S.C. §112, 2nd paragraph. Accordingly, Examiner should also interpret the terms consistently when comparing the claims to the prior art. The Examiner can not interpret the terms semantic network differently, especially within the same reference, in order to twist the prior art to read on the claimed invention.

The document index database is the database that is searched to return files, videos, images, etc. *See Barr* Col. 10, lines 10-14. *Barr* specifically teaches that a semantic network “means a database in which each term carries with it semantic information such as, for example, part of speech and synonym information.” *See Barr*, Col. 23, lines 48-52. Applicant finds no teaching in *Barr* that the semantic network, as defined by *Barr*, is loaded into RAM.

In fact, *Barr* seems to teach away from loading a semantic network into RAM because the semantic network is a database. *Id.* Applicant respectfully submits that a mere mention of hardware elements in a computer system does not rise to the level of a teaching, especially not an enabling teaching that anticipates the elements in claim 2. Therefore, Applicant asserts that independent claims 2 and 14 are in condition for prompt allowance.

Claim 3 recites in pertinent part “**dividing the stream of text into a plurality of threads and conducting the step of consulting a semantic network concurrently for words in each of the plurality of threads and further comprising examining groups of words spread over adjacent threads at the boundaries of the threads for word patterns.**” The Examiner asserts

that “because the system parses the query into proper noun, slow words, and consulting the semantic network, therefore, it clearly divides the text query into plurality of threads.”

Applicants respectfully disagree.

“The words of a claim must be given their “plain meaning” unless they are defined in the specification. “[P]lain meaning” refers to the meaning given to the term by those of ordinary skill in the art.” MPEP § 2111.01.

The Examiner has not given the term “threads” the plain meaning to one of ordinary skill in the art. With the claim language alone, one of ordinary skill in the art understands a thread to mean a separate process or application that can be executed independently by a computer processor such as a CPU. The term “threads” is further clarified in the specification which reads: “The thread division module 115 in one embodiment is used to divide tasks, such as text documents to be processed, into multiple threads for submission to the individual processors 112.” Specification, page 6, lines 24-26.

If claim 3 is interpreted consistent with the Examiner’s analysis, the claim reads “dividing the <query> into a plurality of threads...” Applicants find no disclosure or teaching in *Barr* of dividing the query into a plurality of independent computer processes, or threads. Claim 3 depends from claim 1 and is allowable for at least the same reasons as claim 1. In addition, because *Barr* does not teach dividing a stream of text into a plurality of threads, Applicant submits that claims 3 and 15 are allowable.

Claims 6-8 and 18-20 depend from independent claims 1 and 13. Therefore claim 6-8 and 18-20 are allowable for at least the same reasons as claims 1 and 13.

Claim 10 recites in pertinent part: **“providing links between identified word patterns in the stream of text and objects in a knowledge base to which the word patterns identify.”** The Examiner asserts that this element is taught in Figure 4, elements 340-360 and Figure 4A-C of *Barr*. Applicant respectfully disagrees.

As cited above in relation to claim 1, *Barr* reduces a natural language query to a group of individual words and submits the individual words to a search engine. As discussed above, *Barr* fails to teach or disclose identification of word patterns. In addition, if the interpretation of the Examiner is consistently applied to claim 10, claim 10 would read in part “providing links between identified word patterns in the <query> and objects in a knowledge base[.]” This interpretation is inconsistent with *Barr* and is unreasonable because *Barr* fails to identify word patterns in the query.

Therefore, Applicant asserts that dependant claims 10 and 22 are in condition for prompt allowance. Consequently, dependent claims 9, 11 and 21 which depend from independent claims 1 and 13, are also in condition for prompt allowance.

REJECTION OF CLAIMS 4-5, 12, AND 16-17 UNDER 35 U.S.C. §103(a)

The Examiner rejected claims 4-5, 12, and 16-17 under 35 U.S.C. §103(a) in view of *Barr* and *Trotter*. Applicant respectfully traverses this rejection.

The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. See MPEP § 2142. To establish a *prima facie* case of obviousness, the combination of the prior art references must teach or suggest all the claim limitations. See *id.* Furthermore, even if all the claim limitations are taught or suggested, there must be some suggestion or motivation to combine reference teachings. See *id.*

In addition, any suggestion or motivation to combine references must be established by factual findings. “The factual inquiry whether to combine references must be thorough and

searching. (Quoting *McGinley v. Franklin Sports, Inc.* 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001).) It must be based on objective evidence of record.” *In re Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002). Furthermore, “[an] examiner’s conclusory statements [the court quotes the conclusory statements] do not adequately address the issue of motivation to combine. This factual question of motivation is material to patentability...” *In re Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002). The Examiner fails to provide objective evidence why *Barr* and *Trotter* would be selected and why these references would be combined by one of ordinary skill in the art.

Applicant respectfully asserts that *Barr* and *Trotter* fail to teach or suggest all the claim limitations of the independent claims 1, 12, and 13. Specifically, as discussed above, the references fail to teach or disclose “identify one or more word patterns in the incoming stream of text,” “consulting a semantic network ...with a single examination of each word,” or “referencing a known object identified by a word pattern of the semantic network” as recited in claims 1, 12, and 13. The references fail to teach or disclose identifying word patterns. Consequently, the references also fail to teach or disclose the elements of the claimed invention that operate on word patterns. Instead, *Barr* selectively submits single words of a query into a semantic network. *Barr* teaches that not every word in the query passes through the semantic network. If the word is a slow word or a proper noun, that word does not pass through the semantic network. Because the prior art does not teach the claim limitations, the Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness.

Finally, even if *Barr* and *Trotter* could be interpreted as teaching identification of word patterns and a hierarchically ordered semantic network as recited in claim 4, Applicant submits that the Examiner has failed to provide any factual findings, evidence, as to why one of skill in the art would be motivated to even select the *Barr* and *Trotter* references, much less combine them. The Examiner asserts that it would have been obvious to modify *Barr* to include consulting the semantic network in a hierarchical order as recited in claim 4 “because it shows the relationship of words between databases or nodes.” Office Action page 4. Applicant respectfully disagrees.

Applicant is confused by the Examiner's assertion. Why would one of ordinary skill in the art want to combine *Barr* and *Trotter* and show relationships between databases or nodes? The user typically has no interest in a hierarchical structure of the semantic network. There is no indication in *Trotter* that the semantic network in *Trotter* would offer any advantages by consulting the index, semantic network in *Barr*. Therefore, Applicant finds no reason for combining these two references. In the present invention, the semantic network is not an index but a network data structure which can be consulted in a hierarchical order such that each word in a stream of text is examined only once. Applicant finds no motivation why one of ordinary skill in the art would combine *Barr* and *Trotter* and arrive at the same benefit as that provided in the claimed invention. Therefore, one of skill in the art would not select *Barr* and *Trotter* because the same benefit can not be realized. In addition, the benefit cited by the Examiner does not make sense.

As to the motivation to combine these references, the courts have held that "When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. See, e.g., *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001) ("the central question is whether there is reason to combine [the] references," a question of fact drawing on the Graham factors)." *In re Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002).

A conclusory statement that one of ordinary skill in the art would combine *Barr* and *Trotter* "because it shows the relationship of words between databases or nodes[.]" does not present an articulated reason why one of ordinary skill in the art would be motivated to make such a combination. Applicant submits that such evidence is absent from the Office Action. Consequently, Applicant submits that the Examiner has not met the burden of proof to establish obviousness supported by a teaching, motivation, or suggestion to select and combine *Barr* and *Trotter*.

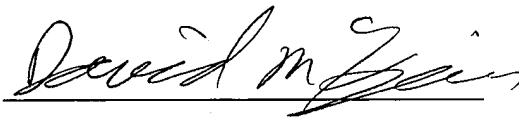
In addition, it is well settled that hindsight is not a proper basis for rejecting the claims. *Heidelberger Druckmaschinen AG v. Hantscho Commercial Products, Inc.*, 30 U.S.P.Q.2d 1377 (Fed. Cir. 1993). "The motivation to combine references cannot come from the invention itself"

but must instead come from the prior art. *Id.* In *Barr*, there is no need to resort to a hierarchical order for the semantic network, which is a database. In *Trotter* there is no discussion of a hierarchical order in regards to a semantic network. Instead, hierarchical is mentioned in relation to database models having one to many relationships. *Trotter* actually teaches away from one to many relationships by teaching that the tree in Figure 1 can include relationships 150-152 which represent a many-to-many relationship.

In hindsight, it is conceivable that a hierarchical order could be used in some fashion with the semantic network, but this view is only considered after reviewing the claimed invention and would not have been obvious to one skilled in the art at the time of *Barr* or *Trotter*. As a result, Applicant asserts that claims 4-5, 12, and 16-17 are in condition for prompt allowance.

In view of the foregoing, Applicant submits that the application is in condition for immediate allowance. In the event any questions remain, the Examiner is respectfully requested to initiate a telephone conference with the undersigned.

Respectfully submitted,



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